# MILLENNIUM-PLAYA DEL MAR APARTMENTS PROJECT

## MITIGATION MONITORING PROGRAM

## State Clearinghouse No. 2006101014

**COUNTY PROJECT NO. R2009-02015**
**GENERAL PLAN AMENDMENT**
**CASE NO. RPAT200900013**
**CONDITIONAL USE PERMIT**
**NO. RCUPT200900150**
**PARKING DEVIATION RPKDT2010000005**
**ZONE CHANGE NO. RZCT200900013**
**ENVIRONMENTAL CASE NO. RENTV200600147**

**LEAD AGENCY:**

**Los Angeles County**
**Department of Regional Planning**
**Impact Analysis Section**
**320 West Temple Street**
**Los Angeles, California 90012**

**October 2010**

**Exhibit**
**Millennium-Playa del Mar Apartments Project, Project R2009-02015**
**Mitigation Monitoring Plan**

| Impact | Mitigation Measure | Monitoring/Reporting Action(s) | Agency Responsible for Compliance | Timing |
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| **GEOLOGY** | | | | |
| Implementation of the proposed project would expose people and structures to strong seismic ground shaking that could result in ground failure. | **4.2-1** A certified geologist shall conduct observation and testing in order to evaluate actual soil conditions during construction activities. Appropriate revisions to the recommendations included in the geotechnical evaluation shall be applied at this time to the satisfaction of the Los Angeles County Department of Public Works, should they be required at the time of field inspections.<br>**The following mitigation measures discuss foundation recommendations for the proposed structures.**<br>**4.2-2** Due to the presence of soft to firm, moderate to high compressible clays below the site, and variable potential liquefaction settlements across the subject site, a shallow foundation shall not be used. Instead, the proposed structure shall be supported on auger pressure grouted displacement (APGD) piles.<br>**4.2-3** To provide uniform support and to improve lateral restraint of the piles, the upper 24 inches of subgrade soils below building pad shall be compacted to 95 percent of relative compaction.<br>**4.2-4** Piles shall be embedded 3 to 5 feet into the dense sand and gravel layer to develop end-bearing capacity. The design pile tip elevation shall be taken as elevation -33 feet below mean sea level. The allowable vertical bearing capacity of a 52-foot-long, 16-inch-diameter APGD pile shall be taken as 200 kips (one kip equals 1,000 pounds of force, kip is short for kilopound). | The applicant shall submit plans designed in conformance with UBC and County of Los Angeles Building Code requirements. | Building and Safety | During plan check |

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| **GEOLOGY (continued)** | | | | |
| | **4.2-5** Piles shall be installed with a minimum 3 diameters center-to-center spacing. For piles with 3 diameters center-to-center spacing no reduction in axial capacity is required.<br>**4.2-6** Total and differential settlement of piles under the recommended allowable load may be taken as 0.5 inch and 0.25 inch, respectively. This recommendation shall be confirmed, and revised as necessary to the satisfaction of the Los Angeles County Department of Public Works, during the pile load testing program.<br>**4.2-7** The liquefaction downdrag acting on a single pile, under a design basis earthquake event, is estimated to be on the order of 68 kips. This maximum downdrag load of 68 kips is based on the assumption that no settlement of the piles occurs due to the application of the downdrag load. It is estimated that piles could settle about 0.25 inch as the downdrag load is applied. This settlement would significantly reduce the downdrag load. Consequently, an ultimate capacity of 400 kip shall be required for piles, assuming the full downdrag of 68 kip for seismic conditions. The ultimate and allowable pile capacity shall be estimated by conducting a static load-testing program to the satisfaction of the Los Angeles County Department of Public Works.<br>**4.2-8** Pre-drilling shall not be permitted for test piles and production piles.<br>**4.2-9** The minimum torque required to indicate penetration into the bearing layer shall be set at 60 ft-kip, unless shown to be otherwise during the load-testing program. | | | |

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| **GEOLOGY (continued)** | | | | |
| | **4.2-10** The following capacities shall be used for the 16-inch-diameter APGD pile that may be used for the building foundation:<br>**Lateral Pile Capacity for a 16-inch Square Driven Concrete Pile**<br>**Free Head Condition**<br>**Pile Head Deflection** **0.5** **1.0**<br>Max Shear (Kips) 9 12<br>Max. Moment (Kip-feet) 30 52<br>Depth to Max Moment (feet) 9.5 10<br>**Fixed Head Condition**<br>**Pile Head Deflection** **0.5** **1.0**<br>Max Shear (Kips) 17 25<br>Max. Moment (Kip-feet) -80 -135<br>Depth to Max Moment (feet) 0 0<br>**4.2-11** Pile-load-testing shall be conducted, which would consist of monitoring the installations of four test piles at selected locations and performing a test loading according to American Society for Testing and Materials (ASTM) 1143-81. The testing program shall be carried out as a separate mobilization by the pile contractor. It is expected that the testing program shall require 26 hours to perform each pile load test in the field plus an additional week of geotechnical analyses by the project engineer to provide the pile length and allowable load recommendations to the satisfaction of the Los Angeles County Department of Public Works. | | | |

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| **GEOLOGY (continued)** | | | | |
| | **4.2-12** Test piles shall be continuously installed to various depths of penetration into dense granular material (Layer 6) below about elevation -26 to-28 feet below mean sea level, using a Bauer BG25 drilling machine, or equivalent, delivering drill torque up to 180,000 foot-lbs. Final tip elevations for test piles shall be at about elevation -33 feet below mean sea level; however, some variability should be expected. Each test pile location requires a cone penetration test (CPT), which shall be completed prior to the load-testing program.<br>**4.2-13** A creep test is required at the recommended allowable load. The creep test holds the allowable load for at least 2 hours to demonstrate displacement of the test pile slows to less than 0.005 inch per hour, which is half the rate recommended ASTM 1143-81. Test piles not meeting this requirement shall be rejected.<br>**4.2-14** The project engineer shall monitor the indicator-pile and production pile installations to verify that piles are installed in accordance with the geotechnical recommendations and have achieved a satisfactory pile length to the satisfaction of the Los Angeles County Department of Public Works.<br>**4.2-15** Per the County requirement, one CPT sounding shall be performed per 12 production piles used in the building foundation. Depending on the actual number of production piles, additional CPT soundings shall be required prior to installing production piles. | | | |

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| **GEOLOGY (continued)** | | | | |
| | **4.2-16** For resistance to lateral loads, an allowable passive fluid pressure of 300 pounds per cubic foot (pcf) may be used for design, for grid beams and pile caps placed in structural fill or in undisturbed, stiff or dense, native soils. Sliding resistance shall not be used due to potentially high liquefaction settlement.<br>**4.2-17** Due to potentially high and variable liquefaction settlement, slab-on-grade shall not be used for the proposed building; instead, structural slab supported on the pile foundation shall be used.<br>**The following mitigation measures pertain to the use of minor retaining walls and fence walls:**<br>**4.2-18** Minor retaining walls that are less than 36 inches in height retaining level backfill, for hardscape around the building exterior (if used) shall be supported near the finish grade on spread footing. Footings shall be designed using an allowable bearing pressure of 1.5 ksf. The upper 12 inches of wall footing subgrade shall be scarified, moisture conditioned as required, and compacted to a minimum of 95 percent relative compaction in accordance with the ASTM D 1557 standard. Retaining wall footings on level ground shall have a minimum embedment of 18 inches below finished grade. Retaining walls founded on a 2:1 (H:V) slope shall have a minimum embedment of 36 inches below the finished grade above the slopeward edge of footing. | | | |

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| **GEOLOGY (continued)** | | | | |
| | **4.2-19** Retaining walls shall be backfilled with non-expansive granular soils with a PI less than 15 percent passing No. 200 sieve or less than 15 percent. A 2-foot-thick cap consisting of less pervious on-site materials shall be used to minimize infiltration of surface water. The finished surface shall be graded to drain away from the proposed structures. Soils within 5 feet of the wall shall either be compacted with hand operated equipment or designed to withstand compaction pressure from heavy equipment.<br>**4.2-20** Cantilever walls, which are free to move laterally at least 0.5 inch for each 10 feet of height, shall be designed for an equivalent fluid pressure of 38 pcf (with level backfill) or 45 pcf (2:1 sloping backfill).<br>**4.2-21** All walls shall be constructed with a properly designed drainage system to prevent buildup of hydrostatic pressures behind the wall. This may consist of geocomposite drain board or 12 inches of clean crushed rock encapsulated in filter fabric, discharging to weep holes or drain pipes. | | | |

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| **GEOLOGY (continued)** | | | | |
| Implementation of the proposed project would expose people and structures to unstable soils. Grading and retaining wall standards mitigation would reduce impacts to a less than significant level. | **4.2-22** To provide uniform support for pavements, and to improve lateral constraint of the piles, the upper 24 inches of subgrade soils below the building pad and pavement shall be compacted to 95 percent of relative compaction.<br>**4.2-23** The project shall comply with the following grading standards as included in the Geotechnical Report to the satisfaction of the Los Angeles County Department of Public Works:<br>• The grading contractor shall be responsible for notifying the Geotechnical Engineer of a pre-grading meeting prior to the start of grading operations and anytime that the operations are resumed after an interruption.<br>• Prior to the start of earthwork, the existing improvements shall require demolition of the existing church on the project site. Existing utilities shall be removed, relocated, or protected, as appropriate.<br>• The project area shall be stripped and cleared of vegetation. Two feet of on-site soil below the proposed building pad and pavement are shall be removed and recompacted to provide uniform support for pavements, and to improve lateral constraint of the piles. The actual limits for removals shall be determined by the project Geotechnical Engineer when final elevations are established for the building and shall be reviewed during grading, depending on the actual conditions encountered. Due to the existence of highly compressible clay layer, if new fill is to be added to the site to an elevation above the existing grade, a surcharge program and waiting period shall be required. | The applicant shall submit a Grading Plan to protect the project from improper surface drainage. | Department of Public Works, Building and Safety | Prior to the issuance of grading permit |

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| **GEOLOGY (continued)** | | | | |
| | **4.2-23 (continued)**<br>• Fill placed under structures or pavements shall be placed as "structural fill." All structural fill shall be free of expansive clay, rock greater than 3 inches in maximum size, debris and other deleterious materials. All structural fill shall be compacted to at least 95 percent of the maximum dry density determined by ASTM D 1557-91. Fill placed in non-structural and landscape areas shall be compacted to at least 90 percent.<br>• The bottoms of completed excavations shall be observed by the project Geotechnical Engineer, while it is proof-rolled with loaded equipment. Any loose or yielding soils shall be over-excavated and recompacted to the limits determined by the Geotechnical Engineer.<br>• All earthwork and grading shall be performed under the observation of the Geotechnical Engineer. Compaction testing of the fill soils shall be performed at the discretion of the Geotechnical Engineer. Testing shall be performed for approximately every 2 feet in fill thickness or 500 cubic yards of fill placed, whichever occurs first. If specified compaction is not achieved, additional compactive effort, moisture conditioning, and/or removal and recompaction of the fill soils shall be required.<br>• All materials used for asphalt concrete and base shall conform to the 2000 "Green Book" or the equivalent, and shall be compacted to at least 95 percent relative compaction. | | | |

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| **GEOLOGY (continued)** | | | | |
| | **4.2-23 (continued)**<br>• If, in the opinion of the Geotechnical Engineer, Contractor, or Owner, an unsafe condition is created or encountered during grading, all work in the area shall be stopped until measures can be taken to mitigate the unsafe conditions. An unsafe condition shall be considered any condition that creates a danger to workers, on-site structures, on-site construction, or any off-site properties or persons.<br>**The following mitigation measures pertain to the temporary excavation involving the removal of the one-level basement of the existing church building during demolition: Depending on the embedment depth of footings, it is likely that 1 or 2 feet of the excavation for removal of the existing basement will be below the water table.**<br>**4.2-24** Water entering the excavation shall be handled by pumping from perimeter ditches and sumps.<br>**4.2-25** Excavation slopes shall be made with an inclination of 1 to 1 (Vertical to Horizontal).<br>**4.2-26** Surcharge loads, such as vehicular traffic, heavy construction equipment, and stockpiled materials, shall be kept away from the top of temporary excavations a horizontal distance at least 5 feet from the excavation. Sloughing of sand slopes and unstable soil zones shall be anticipated within temporary excavations, and workmen shall be adequately protected. Construction equipment and foot traffic shall be kept off excavation slopes to minimize sloughing. | | | |

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| **GEOLOGY (continued)** | | | | |
| | **4.2-27** All excavation slopes shall meet the minimum requirements of the Occupational Safety and Health Association (OSHA) Standards. Maintaining safe and stable slopes on excavations is the responsibility of the contractor and shall depend on the nature of the soils and groundwater conditions encountered and the method of excavation. Excavations during construction shall be carried out in such a manner that failure or ground movement shall not occur. The contractor shall perform any additional studies deemed necessary to supplement the information contained in Geotechnical report for the purpose of planning and executing the excavation plan.<br>**The following mitigation measures pertain to the potential for methane gas hazards at the project site.**<br>**4.2-28** Buildings or structures adjacent to or within 200 feet (60.96 meters) of active, abandoned or idle oil or gas well(s) shall be provided with methane gas-protection systems per County Building and Safety requirements, as defined in Los Angeles County Building Code Section 110.4. | | | |

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| **NOISE** | | | | |
| Noise levels during some phases of site redevelopment would exceed standards for daytime construction noise as set by the County Noise Ordinance. | **4.3-1** Driven pile driving shall be prohibited. The proposed structure shall be supported on auger pressure grouted displacement (APGD) piles only to help minimize the disrupting effects of noise and vibration normally associated with driven piles.<br>**4.3-2** All construction equipment, fixed or mobile, that is utilized on the site for more than two working days shall be in proper operating condition and fitted with standard factory silencing features. To ensure that mobile and stationary equipment is properly maintained and meets all federal, state and local standards, the applicant shall maintain an equipment log. The log shall document the condition of equipment relative to factory specifications and identify the measures taken to ensure that all construction equipment is in proper tune and fitted with an adequate muffling device. The log shall be submitted to the Los Angeles Department of Public Works and Public Health for review and approval on a quarterly basis. In areas where construction equipment (such as generators and air compressors) is left stationary and operating for more than one day within 100 feet of residential land uses, temporary portable noise structures shall be built. These barriers shall be located between the piece of equipment and sensitive land uses. As the project is constructed, the use of building structures as noise barrier would be sufficient. The County building official or a designee should spot check to ensure compliance. The operator shall brief all employees and subcontractors on noise control guidelines and procedures prior to construction operations. | The applicant shall submit an equipment log to ensure the equipment is properly maintained. | Department of Public Works Building and Safety | Log submitted quarterly and during field inspections |

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| **NOISE (continued)** | | | | |
| | **4.3-3** All exterior construction activity, including grading, transport of material or equipment and warming-up of equipment, shall be limited to between the hours of 8:00 AM to 5:00 PM, and shall not occur during weekend periods unless approved by the Los Angeles County Department of Public Works. Idling mode of mobile equipment shall be minimized. All equipment not in use longer than 5 minutes shall be turned off, unless proper silencing features are provided. When feasible, hydraulic equipment should be used instead of pneumatic impact tools and electric powered equipment instead of diesel powered equipment for exterior construction work. For smaller equipment such as air-compressors and small pumps, line powered (electric) equipment should be used when feasible. The work schedule shall be posted at the construction site and modified as necessary to reflect deviations approved by the Los Angeles County Building and Safety Division. The County building official or a designee should spot check and respond to complaints.<br>**4.3-4** The project applicant shall post a notice at the construction site and along the proposed truck haul route. The notice shall contain information on the type of project and anticipated duration of construction activity, and shall provide a phone number where people can register questions and complaints. The applicant shall keep a record of all complaints and take appropriate action to minimize noise generated by the offending activity where feasible. A monthly log of noise complaints shall be maintained by the applicant and submitted to the County of Los Angeles Department of Public Health. | | | |

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| **AIR QUALITY** | | | | |
| Construction activities associated with the development of the project would have significant impacts because emissions generated by these activities would exceed SCAQMD significance threshold for VOC during construction activities. | The South Coast Air Quality Management District (SCAQMD) has prepared a list of measures to reduce the impacts of construction-related emissions to the greatest extent possible. Those that could be feasibly implemented during the development of the project to mitigate the ambient air impacts for VOC are as follows for architectural coatings:<br>**4.4-1** The project Contractor shall use only interior and exterior architectural coatings certified to the SCAQMD Super-Compliant VOC standards. Low-VOC coatings may be used if no feasible Super-Compliant VOC coating is commercially available. Low-VOC coatings are certified to the SCAQMD Rule 1113 (Architectural Coatings) standards while Super-Compliant VOC coatings are reformulated to levels below the standards.<br>**4.4-2** The Contractor shall avoid non-essential architectural coating during the peak smog season: July, August, and September.<br>**4.4-3** The Contractor shall keep architectural coatings lids closed on all containers when not in use to prevent VOC emissions and excessive odors.<br>**4.4-4** The Contractor shall keep all paint and solvent laden rags in sealed containers to prevent VOC emissions. | The applicant shall submit a construction materials plan to ensure use of low-VOC coatings. | Department of Public Works | Prior to issuance of a building permit and on going during construction |

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| **TRAFFIC AND ACCESS** | | | | |
| No analyzed intersection would be significantly impacted by the proposed project under Future Year 2013 Conditions with the exception of the intersection of Grosvenor Boulevard and Jefferson Boulevard during the morning peak hour. Therefore, the project would result in a significant cumulative impact prior to mitigation. | **4.5-1** A traffic signal including the provision of an Automated Traffic Surveillance and Control (ATSAC) System and Adaptive Traffic Control System (ATCS) shall be installed at the intersection of Grosvenor Boulevard/Jefferson Boulevard, prior to the issuance of a certificate of occupancy. The project shall be solely responsible for the design and construction of the new traffic signal at this intersection. The design and construction phases shall be processed through a B-permit issued by the City of Los Angeles' Department of Public Works, Bureau of Engineering. | Submittal of plan for review | City of Los Angeles, Bureau of Engineering | Prior to issuance of certificate of occupancy |
| **VISUAL RESOURCES** | | | | |
| Reflective surfaces on the proposed structures could impact adjacent residents.<br>Interior lighting of the parking structure and headlamp illumination within the parking structure have the potential to adversely impact residents of the existing apartment build situated south of the project site. | **4.6-1** Proposed building materials, paint colors, wrought iron balconies and rails shall not be constructed with highly reflective material.<br>**4.6-2** Exterior lighting and lighting within the parking structure shall be shielded to prevent light from spilling over onto adjacent properties. Exterior lighting and internal parking structure lighting plans shall be submitted to and approved by the Los Angeles County Department of Regional Planning prior to construction.<br>**4.6-3** Exterior landscape plans and plans for the parking structure vegetated screen shall be submitted to and approved by the Los Angeles County Department of Regional Planning prior to construction. | Submittal and approval of landscape and final design plans | Department of Regional Planning | Prior to issuance of building permit |

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| **HYDROLOGY AND WATER QUALITY** | | | | |
| Upon completion of the proposed project, the project site would be covered with non-erosive surfaces, including roofs, pavement, and/or permanent vegetation, which would reduce sediment in site runoff. As a result, the potential for post-development sedimentation would be reduced or eliminated and impacts associated with project operation are not significant. | **4.7-1** A final drainage plan, final grading plan, NPDES permit and SWPPP (including an erosion control plan if required) shall be prepared by the applicant to ensure that no significant erosion, sedimentation, or flooding impacts would occur during or after redevelopment of the project sites. These plans shall include source control Best Management Practices (BMPs) that address non-stormwater discharges, waste handling and disposal, safer alternative products, building/grounds maintenance, building repair/construction, parking/storage area maintenance, drainage system maintenance, site design, landscape planning, efficient irrigation and storm drainage signage. Additionally, these plans will include site design BMPs to minimize impervious area, maximize permeability (C-Factor Reduction), and minimize directly connected impervious areas. These plans shall be prepared to the satisfaction of the Regional Water Quality Control Board and Los Angeles County Department of Public Works, Flood Control Division prior to the issuance of grading, demolition, or building permits. | The applicant shall submit a final drainage plan and final grading plan | Department of Public Works | Prior to issuance of demolition and grading permits |
| **SOLID WASTE SERVICE** | | | | |
| Demolition of existing uses would generate approximately 15,000 cubic yards (cy) of demolition debris. | **4.9-1** The Millennium-Playa del Mar Apartments project shall comply with Title 20, Chapter 20.87, of the Los Angeles County Code, Construction and Demolition Debris Recycling. The project proponent shall also provide a Waste Management Plan to recycle, at a minimum, 50 percent of the construction and demolition debris. The Waste Management Plan shall be provided to the County of Los Angeles Department of Public Works for review and approval, prior demolition. | The applicant shall submit a Recycling and Reuse Plan | Department of Public Works | Prior to issuance of demolition and grading permits |

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| **SOLID WASTE SERVICE (continued)** | | | | |
| The proposed Millennium-Playa del Mar Apartments project would generate a net increase over existing uses of approximately 853.2 pounds per day, or about 156.9 tons per year, of solid waste. These quantities represent a worst-case scenario, with no recycling activities in place. However, project uses would be required to provide adequate areas for collecting and loading recyclable materials in accordance with the County's model ordinance to reduce the volume of solid waste entering landfills. This recycling, implemented in concert with the Countywide efforts and programs, would reduce the volume of solid waste generated by the project and entering landfills. | **4.9-2**. To reduce the volume of solid and hazardous waste generated by the operation of the project, a solid waste management plan shall be developed by the Millennium-Playa del Mar Apartments project applicant. This plan shall be reviewed and approved by the County of Los Angeles Department of Public Works and shall be made available to all new residents. The plan shall identify methods to promote recycling and re-use of materials, as well as safe disposal consistent with the policies and programs contained within the County of Los Angeles Source Reduction and Recycling Element. Methods shall include locating recycling bins in proximity to dumpsters used by future on-site residents. | The applicant shall submit a solid waste management plan. | Department of Public Works | Prior to issuance of demolition and grading permits |